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ADMINISTRATION**

PROVIDER LEVEL SATISFACTION WITH SERVICE LINE MANAGEMENT AT BLANCHFIELD ARMY COMMUNITY HOSPITAL

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BY

CPT JEFFERY F. RIMMER

BLANCHFIELD ARMY COMMUNITY HOSPITAL
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The introduction of the Prospective Payment System (PPS) in the early 1980s, capitated financing from managed care organizations (MCO), and reduced payments from traditional fee-for-service payers have created an increasingly competitive climate for civilian hospitals. Likewise, military hospitals must contend with an ever-decreasing budget, force structure reductions, and installation closures. These changes have forced hospitals to search for innovative ways to structure their organizations to remain viable. One method of structuring the hospital, which has gained popularity in the past 10 years, is to organize around products or services. This configuration is called product or service line management (PLM/SLM). This paper discusses PLM in hospitals, and it explores the applicability of implementing PLM in U.S. Army Medical Department Activities(USA MEDDACs). Finally, this paper evaluates provider level satisfaction with SLM and the implementation of that philosophy in a medium military medical treatment facility to support recommendations for sustainment and improvement where necessary.

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Abstract

The introduction of the Prospective Payment System (PPS) in the early 1980s, capitated financing from managed care organizations (MCO), and reduced payments from traditional fee-for-service payers have created an increasingly competitive climate for civilian hospitals. Likewise, military hospitals must contend with an ever-decreasing budget, force structure reductions, and installation closures. These changes have forced hospitals to search for innovative ways to structure their organizations to remain viable. One method of structuring the hospital, which has gained popularity in the past 10 years, is to organize around products or services. This configuration is called product or service line management (PLM/SLM). This paper discusses PLM in hospitals, and it explores the applicability of implementing PLM in U.S. Army Medical Department Activities (USA MEDDACs). Finally, this paper evaluates provider level satisfaction with SLM and the implementation of that philosophy in a medium military medical treatment facility to support recommendations for sustainment and improvement where necessary.

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Introduction

A modern facility occupying four levels and over 484,000 square feet, the Colonel

Florence A. Blanchfield Army Community Hospital (BACH) is the only Army hospital

named for an Army nurse. The facility houses outpatient as well as inpatient services and

is licensed for 241 beds, expandable during wartime. BACH is staffed with 460 active

duty military and 664 civilian personnel who serve a population of over 82,760

beneficiaries in a 40-mile radius of the hospital. The population includes 24,334 active

duty service members; 35,067 active duty family members; 6,505 retirees and 13,145

non-active duty family members under 65 years of age; and 8,709 beneficiaries over 65

years of age.

<u>Business Concept</u>

As a premier managed care operation, Blanchfield Army Community Hospital

strives to provide high quality, accessible, and cost effective care for its beneficiaries.

BACH's mission is to maintain a medically fit force, to deploy mission-ready medical

soldiers, to manage the comprehensive health services for the Fort Campbell military

community, and to transition to a wartime operational mode upon command. Its vision is

to be the premier military community health care system. Current business strategies

focus on the provision of services for those enrolled in TRICARE Prime . The facility is

financed by a capitated budget for these individuals. Others who have an entitlement may

use the services on a space available basis in accordance with Army Regulation 40-3 (AR

40-3). Comprehensive health care services are made available as needed to enrolled

members. Primary service lines available at Blanchfield are consistent with the needs of

the demographic population it serves and includes primary care, maternal-child, surgical

specialties, health promotion and mental health. Other specialty services for prime and

non-prime members are provided in the facility, in the managed care contractor's network

for Region 5, in the local community preferred provider network Health Services Region

4 & 5, or at a tertiary care military treatment facility. The decision to buy or make

clinical services is based on a well founded business analysis that considers many factors

including: identification and quantification of clinical needs, cost, access, transportation,

patient convenience/desire, availability of quality care locally, current standards of care,

and future planning. The business concept is based on Blanchfield's mission and vision.

These are operationalized in the organizational strategic plan. There has been a deliberate

attempt to link the goals and priorities of higher headquarters with the business plan.

These higher headquarters include Forces Command (FORSCOM), Medical Command

(MEDCOM), Southeast Health Regional Medical Command and Department of Defense

Health Service Region (DoD HSR) 5 Lead Agent Office. Important priorities and themes

on which the business is based includes combat-readiness, commitment to excellence,

professionalism, accountability, patient-centered quality care, accessibility, cost

containment, resource conservation, and modernization.

Market

Although the Region 5 managed care contractor's preferred providers network is

still developing, many influences, factors, and organizations fashion the local healthcare

market. There are four acute care for-profit community hospitals within the Fort

Campbell catchment area, two of which provide services not available at BACH such as

cardiac catheterization, neonatology, perinatology and oncology services. There are two

fiercely competitive primary care/specialty groups located 30 miles north of Fort

Campbell and in the city of Clarksville, Tennessee.   In addition, a local medical group 20

miles to the north has contracted with the Nashville Department of Veterans' Affairs

Medical Center to become the primary care manager for an enrolled population of

veterans (many of which are dual eligible) to provide primary care and some specialty

services with inpatient care at the VA.

Competitive Strategy

Previous competitive strategies have been successful in capturing the bulk of the

market share for primary care, obstetric care, orthopedic surgery, general surgery,

ambulatory surgery, pediatrics, urology and otolaryngology.   Blanchfield is a very

customer focused facility and listens to the voice of their customers in developing

services. The transition to the primary care manager (PCM) concept was the first step in

Blanchfield's conversion to managed care. A PCM manages all aspects of beneficiary

care and serves as the gatekeeper for all beneficiary healthcare. Blanchfield has also

augmented primary care clinics with mid-level providers, ancillary staff and Registered

Nurses to implement demand management strategies to increase patient access to care

and health information. Patient satisfaction has increased and access to care has been

enhanced. The introduction of a Mother-Baby Unit, combined postpartum and newborn

nursery, offers a family centered approach to childbirth. An Asthma Education Center

was opened to offer education for asthmatic children and their parents/care givers. Areas

of educational concentration include living with Asthma, medications, peak flow meters,

and trigger identifiers with control. The goal of all these programs is to decrease

emergency room visits, lost school days and to improve quality of life and quality of care.

Aggressive case management and utilization management ensure timely continuation of

care and help ensure that the continuum of care is seamless by doing the right thing: the

right patient, in the right place, at the right time, with the right resources to get the right

outcome.

<u>Major Initiatives</u>

Multiple major initiatives have been implemented to make Blanchfield's competitive

strategy a reality. The ability to use resources within the region has a great impact on

fiscal outcomes. The following are some of the patient friendly, resource optimizing

initiatives undertaken by Blanchfield:

Urgent Eagle Clinic is an after-hours, acute care clinic. Originally started as a

"fast-track" for the Emergency Room, Urgent Eagle was developed into a separate clinic

in August 1996. Generally staffed by two or three health care providers, the Urgent Eagle

clinic is open Monday through Friday from 1500-2300, weekends and holidays from

0900-2100.

Night Clinic is for patients who prefer an evening appointment. The night clinic

was started in February 1997. Offering routine and same-day appointments to enrolled

members, the Night Clinic is an attractive alternative for those with work or child care

concerns. The Night Clinic is staffed by three health care providers, who see patients

from their respective clinics. Hours of operation are Monday through Friday from

1700-2000.

The Well Baby Clinic offers health services for routine well baby checks in an area completely separate from sick children. Physicians and Nurse Practitioners are not only able to render the appropriate health checks, but also offer valuable teaching to parents.

Central Triage is an alternative area where individuals seeking care without an appointment are evaluated by a Registered Nurse and dispositioned (triaged) to the most appropriate level or source of care. Each of the aforementioned clinics provide beneficiaries with a greater access to care. Blanchfield has also introduced several managed care concepts to provide the right care at the right time and at the appropriate level.

To ensure optimum use of resources, utilization review nurses employ pre-admission and discharge planning as well as education to admitting physicians and nursing managers in an inpatient setting. In addition, Blanchfield performs first level review on all specialty care requests which ensures patients referred outside the medical treatment facility are adequately tracked to ensure quality of care. This first level review also serves as an effective means to find appropriate MTF care alternatives in lieu of TRICARE or supplemental care. BACH has instituted a Referral Management Center to ensure optimization of MTF resources. The case management program is both fiscal and clinical. Case management oversees several of the areas within the MTF and focuses on disease management initiatives and the interface with our referral network to improve quality, cost, and continuity of care.

Marketing and customer relations are growing priorities for the survival of the military health care system at Fort Campbell. Customers include the beneficiaries, as well as internal and external suppliers of care. Likewise, the Fort Campbell and

surrounding area is a growing, dynamic community. Therefore, the Clarksville and

Hopkinsville health care institutions have marketed and developed unique health care

offerings for this geographic population. Their ability to meet the needs of our non-prime

beneficiaries helps to support our overall healthcare mission. Also, military beneficiaries

for trauma, invasive cardiology, complex maternity, and medical and surgical pediatric

subspecialties use two major medical centers in Nashville. Blanchfield continues to

develop the use of Telemedicine to improve local patient care by communicating with

regional experts at Wright-Patterson Air Force Base. A new Consolidated Troop Medical

Clinic has been approved for Fort Campbell and operational start date is in the year 2000.

With services in one large clinic, service redundancy will be eliminated and resources

conserved. Telephone health care advice nurses aid the primary care managers in

managing their enrollees. These tools allow beneficiaries to take a more active role and

responsibility for their own care, increase beneficiary satisfaction, and reduce health care

costs due to inappropriate use of services (DoD HSR5, 1998).

Conditions which Prompted the Study

Several military medical treatment facilities throughout the Army Medical

Department have attempted to adopt the management philosophies of their civilian

counterparts to keep pace with the dynamic environment in healthcare today. One

management method introduced in several facilities is product line management (PLM).

Guidance from the U.S. Army Medical Command (MEDCOM) allows the

hospital commander to use his/her discretion when establishing the internal structure of

any military medical treatment facility (MEDCOM Regulation 10-1). The implications of

this discretion can be as narrow as resource allocation in terms of personnel or money

within an individual department or as broad as the re-organization of an entire MTF structure. These decisions not only effect the internal relationships of the hospital staff, but they also effect the external review from corporate entities (i.e., Health Service Region 5 and the Southeast Regional Medical Command).

As previously mentioned, several Army MTFs have implemented a PLM approach to organizational management. These include Martin Army Community Hospital (MACH), Fort Benning, Georgia; Kenner Army Health Clinic, Fort Lee, Virginia; Dwight D. Eisenhower Medical Center (DDEMC), Fort Gordon, Georgia; and Blanchfield Army Community Hospital (BACH), Fort Campbell, Kentucky. As of this time, the only facility still operating under a PLM structure is Blanchfield Army Community Hospital.

Blanchfield implemented PLM on 1 October 1997. The underlying goals supporting its implementation includes enhanced communication, empowerment of employees and managers, a sense of ownership, improved patient care focus, and incentives for innovative techniques. The introduction of PLM coupled with the implementation of TRICARE in May of 1998 has intensified the climate of change within BACH's organizational walls.

With an impending executive leadership changeover in the Spring of 1998, some question the timing of the introduction of this management philosophy. Others question the current structure's ability to adequately address and account for the needs and requirements for a hospital to operate in a managed care environment. Either way PLM is now a part of Blanchfield Army Community Hospital, and therefore, its implementation

must be periodically reviewed to determine if it is meeting the immediate needs of the

customers and the strategic needs of Blanchfield as an organization.

Statement of the Problem

The introduction and implementation of Product Line Management as well as a

number of critical characteristics for success is well documented in the business and

healthcare industries. The following research will identify provider level satisfaction

based on those critical characteristics. These findings can be used to benchmark

Blanchfield's overall success or failure with respect to its implementation of SLM.

Therefore, how satisfied are providers at Blanchfield Army Community Hospital with the

implementation of Service Line Management based on these same critical characteristics.

Literature Review

Increased competition, changes in reimbursement methodologies (introduction of

the Prospective Payment System in 1980s), capitated financing from managed care

organizations, and a requirement to provide some services at discounts are some of the

external pressures which have forced hospitals to become more cost efficient and

business-like in the provision of healthcare products and services (Manning, 1987). In

order to improve cost control measures and enhance internal management control,

hospitals are turning to business and adopting some of their methods to increase

efficiency and productivity. The idea of hospitals turning to business for managerial and

financial advice is not a new concept. Hospitals have often looked outside the healthcare

industry and towards business as a source of potential solutions to business problems

(Bowers & Taylor, 1990).

One business practice being adopted by some hospitals is product line management (PLM). The concept of PLM requires the organization to organize itself around products or services. PLM is defined as "the organizational structure, management control system, and delivery strategies for healthcare services structured around case types of major clinical services" (Nackel & Kues, 1986). PLM is designed to increase efficiency by reducing costs and service duplication while improving communication and planning (Nackel & Kues, 1986).

While most management experts agree that PLM can be an effective management tool, there is disagreement about PLM being appropriate for the healthcare industry and hospitals in particular (Naidu, et al, 1993). Critics of PLM in healthcare are skeptical about its applicability because of the unique nature of healthcare. PLM depends on being able to define a customer. In healthcare, depending on how you define your product; patients, physicians, nurses, and employers are all customers. In addition, there is not a universally accepted definition of product lines (Naidu, et al, 1993). Advocates of PLM in healthcare believe it is effective and has numerous organizational benefits which include (a) focusing accountability for operations and results, (b) facilitating coordination among departments, (c) focusing on targeted specific client groups, (d) strengthening the relationship between strategy development and the budgets, and (e) promoting the evaluation of new and existing programs (Studnicki, 1991).

History of PLM

There are three commonly used organization structural models in manufacturing: (a) functional, (b) market management, and (c) PLM (Bowers & Taylor, 1990). In a functional organizational structure, the focus is placed on the performance of independent

job activities and not on the final product. No one person is given the responsibility for the quality of a final product. In market management, the emphasis is placed on the market, whether it is done with one or multiple product lines does not matter. The inherent weakness of both the functional and market management organizational structures is that a promising new product may be overlooked. PLM was introduced to correct this potential problem. PLM assigns managers (product line managers) to supervise and manage an individual product or products (Bowers & Taylor, 1990).

PLM has been used in manufacturing for over 50 years (Bowers & Taylor, 1990). Proctor and Gamble (P&G) is generally given credit for being the first major manufacturer to use PLM when, in 1928, they used PLM to market their new product, Lava soap (Yano-Fong, 1988). PLM experienced a boom during the 1960s with over 80% of the large manufacturing companies using PLM to compete in rapidly changing environments (Yano-Fong, 1988). During this time, most companies believed that PLM was simply more effective, resulting in the widespread replacement of the more traditional, centralized approach to management. PLM's acceptance was evidenced by many of the Fortune 500 companies adapted their organizational structures to accommodate the requirements of PLM (Naidu, et al, 1993).

The proliferation of PLM as an organizational structure model slowed in the 1970's because many of the large manufacturers (i.e. Pepsi, Purex, Eastman Kodak, and Levi Strauss) had become disenchanted with PLM and stopped using it (Bowers & Taylor, 1990). Reasons for disenchantment with PLM include: (a) conflict and frustration created by the product line managers' responsibilities surpassing their authority, (b) product line managers being required to make decisions requiring expertise

they do not have, (c) managers losing touch with their markets because they spend most

of their time dealing with internal problems, and (d) PLM is a costly system (Bowers &

Taylor, 1990).

According to Bowers & Taylor (1990), PLM is still being used in industry today

but in a greatly modified form. For example, Proctor and Gamble, the innovator of PLM,

has altered the concept of one individual being responsible for all aspects of a product to

a team of specialized individuals (finance, research, engineering, sales, etc.) who answer

to the product category manager. A similar modification includes making the individual

product manager part of a product team.

PLM in Hospitals

Models of PLM in Hospitals

Patterson & Thompson (1987) identified three predominant models of PLM that

have emerged in hospitals: (a) market management, (b) distribution management, and

(c) strategic business units (SBU) management. In the market management mode, the

emphasis is placed on closely observing the healthcare market for potential opportunities

and then quickly capitalizing. An individual, usually a healthcare professional with a

background in administration or nursing, is given the title of market manager and is

responsible for projecting and obtaining market volume, determining the appropriate

product characteristics to best serve the hospital's market, and advising top management.

The market manager accomplishes these responsibilities by remaining in continuous

interaction with the market.

The market management model is considered by Patterson & Thompson (1987) to

be the least threatening to most current hospital organizational structures because it

causes the least restructuring of the three models. In this market management model, the

market manager has only an advisory role. The decisions to act remain with the hospital's

top management. The implementation of the market model often represents the first step

towards organizational change. While the market management model focuses on a

particular market segment of customers, the distribution model focuses on how those

customers are managed throughout the entire continuum of care.

The distribution management model focuses on managing the referrals to the

hospital from physicians and organizations such as health maintenance organizations

(HMOs), preferred provider organizations (PPOs), etc. (Patterson & Thompson, 1987).

In this model, a product line manager is selected to be the distribution manager and is

given additional responsibilities of ensuring a steady stream of referrals for several

product lines. Essentially, the distribution manager closely monitors existing patient

referral sources for several product lines while attempting to create new product lines

from a stream of different referrals. The primary measurement of success of the

distribution manager is increased utilization.

The strategic business unit (SPU) management model represents the most

significant change to the organization structure (Patterson & Thompson, 1987). In the

SBU model, the hospital develops four to eight distinct business lines organized around

clinical, operational or market similarities without regard for whether the service is

provided in a hospital or an ambulatory setting. Managers assume full responsibility and

authority for the product.

Cole & Brown (1988) added a fourth model called the coordinated care model. In

this model, the organization creates a new staff position which focuses on case

management, integrates the hospital's many programs and activities into a common theme

(similar to a product line), and measures success by increased volume.

Problems

While the basic motives for initiating PLM in healthcare (improving the hospitals

competitive position and increasing profitability) are undisputed, the effectiveness has

been questioned (Patterson & Thompson, 1987). The primary reason for questioning the

effectiveness centers around the problem that there is no clear definition of a product line

or product line management in healthcare (Manning, 1987). In fact, the term product line

management has become a catchword for so many different organizational approaches

that the term is in danger of trivialization (Zelman & Parham, 1990).

The introduction of the prospective payment system (PPS) and diagnostic related

groups (DRGs) was initially thought to provide an adequate basis for a universally

defined product line, but this proved unworkable because there are approximately 428

different DRGs in most hospitals (Manning, 1987). The next step was to combine similar

DRGs, but this contributed to the universally defined problem as each hospital had their

own interpretation as to what DRGs should be combined together.

In addition to the problem defining product lines, Manning (1987) also believes

that the healthcare industry is significantly different than the manufacturing industry,

making the principles of PLM ineffective. Manning states that healthcare is service

oriented and the services provided must be described in terms of a continuum, instead of

discrete events as in manufacturing. Variations in the "production" of healthcare services

due to epidemiological factors can only be crudely compared to variations in the

manufacturing environment, such as spoilage (Manning, 1987). Additionally, hospitals

have an ethical, operational, image, and licensure requirement to provide a core of basic

services regardless of their profitability, while the manufacturing industry is free to stop

making unprofitable items (Manning, 1987).

Fottler & Repasky (1988) support Manning's views that PLM is difficult to

implement because of healthcare's unique nature. They state that healthcare is simply

different than manufacturing and the major barrier to the adoption of PLM in hospitals is

what they consider to be "the humanistic conception of service." This conception

includes a strong ethical presumption that the physician should be left alone to treat the

patient without regard to the bottom line.

Studnicki (1991) states that internal management can be another source of

problems in implementing PLM in hospitals. These problems include resistance to

change and complacency, additional operating expenses required for another

administrative level, and difficulty in developing information and cost reporting systems

to support PLM.

Defining a Product Line

A product line consists of a group of related products or services a patient may

purchase. For example, oncology may be a product line consisting of several services

such as bone marrow transplant, radiation therapy, pain management and counseling

(France & Glover 1992). The primary objective of implementing PLM should be to

identify segments of the hospital's business that are strategically and economically

significant (Manning, 1987).

MacStravic (1986) stated that a product is defined by a market. A product is

whatever physicians, patients, or other people see as answering their demand. A product

in health services can be thought of as activities and/or experiences that are offered and consumed by an identifiable set of people in ways that are different from other sets. In a hospital the best approach would be to think of product lines as specific programs or service categories (pediatrics, obstetrics, oncology, etc...).

O'Malley, et al (1991) developed several criteria for identifying product lines. Their criteria are: (a) be identifiable to the market (primary care, OB/GYN), (b) have a specific market in mind (young couples, women), (c) contribute significantly to hospital long range planning and daily operation, (d) be an identifiable diagnostic category, (e) have unique or dedicated production facilities, staff, and technology, (f) be recognized as a unique or special program, (g) be an administratively manageable unit, and (h) be linked to treatment patterns of medical staff.

Implementing Product Line Management in Hospitals

In order to adequately implement Product Line Management, two distinct planning factors should be considered. First, an organization should look at how the reorganization will take place, and finally, there should be a well established methodology for implementation.

Nackel & Kues (1986), believe that hospital management should consider the following when contemplating reorganization according to product lines: (a) the product line should be based on the clinical delivery structure of the organization, (b) span of control at each level should not exceed eight to ten functions, (c) staff services such as information systems should be a corporate objective, and (d) staff activities such as personnel and finance should work closely with department heads/service line chiefs but answer to the chief executive officer (CEO).

Studnicki (1991) references a management methodology for implementing PLM created by a suburban Baltimore hospital. The six steps include: (a) define the service line (they grouped all DRGs into 35 service lines), (b) determine the contribution of each service line to total inpatient volume, (c) determine trends in product line volumes, (d) derive a useful comparison group (competing hospitals), (e) review multiple time frames, and (f) summarize and analyze the long and short term performance.

<u>Keys to Success</u>

Just as in any other major organizational change, success is determined in part by the commitment of the executive management (O'Malley, et al, 1991). Convincing the physicians and getting their support is vital to success. In the healthcare industry, it is simply a fact of life that physicians have more control and influence on the process than anyone else (Manning, 1987).

In addition to physician acceptance, Zelman & McLaughlin (1990) believe that there are some basic preparations which lead to successful implementation of product line management in organizations. They are: (a) get people in the organization to think about possible roles and organizational structures and unfreeze their thinking about how services could be organized under various market structures, (b) familiarize the staff and administration with the true role of the product line manager, (c) select and train potential individuals who possess the attributes required to be effective product line managers, and (d) experiment with new product line organizations within subunits of the hospital before making significant organizational structure changes.

Similarly, Nackel & Kues (1986) consider the keys to successful implementation of PLM to be: (a) the willingness of corporate officers to delegate decision making

authority, (b) the assumption of responsibility from the product line managers, (c) the

acceptance and support of the nursing staff, (d) the development of management and

financial information systems to support decentralization, and (e) effective

communication between product line managers and the central administrative units as

being keys to successful implementation of PLM.

Required Components

     According to Patterson & Thompson (1987), in order for PLM to be successful

there are some required components which must be present in the health care

organization. Some of these components are not PLM specific but are still important for

successful implementation. The components and a brief description follows:

     (a) Skills and attitude. Do employees and board members have the skills and

attitude necessary to deal with the change? Are they flexible enough to vary their

organizational structure?

     (b) Decision/control systems. Do appropriate information systems exist to

support a new organizational model? In order to be effective, managers must be able to

measure their efforts.

     (c) Organizational structure. Are accountabilities assigned to the right people?

Are managers held responsible for operations outside their chain of control? Is there a

clear span of authority and responsibility?

     (d) Values and beliefs. Are the decision making and day to day operating

requirements of PLM compatible with the organization's management style or culture?

Does the organization have heroes it can call upon in times of change to encourage

cooperation across traditional clinical and hierarchical lines?

In addition to these components, corporate commitment is one of the most important required components to make PLM work, closely followed by the need to educate the staff in the organization on the principles of PLM. The education should focus on team building, developing marketing strategies, and effective management techniques when using PLM (Simpson & Clayton, 1991).

Action Plan

Closely related to the required components for successful implementation of PLM in hospitals is the development of the action plan. Nackel & Kues (1986) developed an action plan for implementing product line management in hospitals from a detailed analysis of how product line management was implemented at the Johns-Hopkins Hospital. Although the Johns-Hopkins Hospital is a unique, large teaching hospital, the action plan developed is broad enough to fit any type of hospital considering implemention of PLM. They determined that the key activities in developing PLM in hospitals are: (a) inform top management of the PLM philosophy and get their support, (b) determine the product lines (business units) around which the organization will be structured, (c) identify organizational responsibilities, (d) develop a planning and budget process around the new product lines, (e) communicate the organizational structure from the top through middle management and (f) reassess the product line organization on a periodic basis.

Key Attributes of a PLM Manager

If all the required components to the successful implementation of PLM are present, the you still need a competent PLM manager. The characteristics of a PLM manager are similar to that of a successful entrepreneur. In fact, one of the advantages of

PLM is it creates a sense of autonomy and an entrepreneurial attitude among its

managers. Verespej (1988) considers PLM managers to be like miniature chief executive

officers (CEOs) of discrete profit centers.

Having technical expertise is an essential attribute of successful PLM managers.

In fact, Baylor University Medical Center in Dallas, which implemented PLM in the

1980s hires only experienced technical experts to manage their product lines and expects

them "to hit the ground running" (Ruffner, 1986). Technical expertise was further

defined by O'Malley, et al (1991), when they summarized the additional required qualities

of PLM managers as needing: (a) strong analytical skills, (b) expert interpersonal skills,

(c) propensity for risk taking, and (d) an ability to establish effective work relationships

with all stakeholders (physicians, administrators, patients, employers, and third party

payers).

PLM Study

Nackel & Kues (1986) studied the implementation of PLM at The Johns-Hopkins

Hospital. They concluded that PLM success is highly dependent on how the product lines

are defined and how many product lines are present in the organization. Another

interesting point involves their thoughts on PLM management which they believe to be as

much an art as a science, alluding to the political nature of consensus building that PLM

requires to be effective. Their final point relates to communication. Based on their study,

they believe that a move to PLM requires increased communication between the PLM

managers and the ancillary support staff.

Fottler & Repasky (1988) conducted a study involving 24 hospitals in Alabama,

Florida and Georgia who had not implemented PLM. The hospitals included in the study

were both not-for-profit and for-profit, ranging from 52 to 871 beds. The hospitals' top

management was sent an information packet explaining PLM and was asked to respond to

a questionnaire. Although 67 percent of the hospitals felt that PLM was applicable to

hospitals, 33 percent felt that PLM's applicability was limited to large hospitals (200+

beds). Fifty-eight percent thought it was likely that their hospital would adopt PLM,

while 29 percent believed it unlikely, and 12 percent were unsure.

In another study, Bowers & Taylor (1990) presented a case where a modified

version of PLM is in place. The modified version of PLM is similar to what is more

likely to be seen if PLM is implemented in a USAMEDDAC. In this study, two of the

five hospitals using PLM had a modified form of PLM in place. The first hospital

modified PLM to make the product line manager responsible for coordinating the

activities of a product team but not individually responsible for the product or its

profitability. Another hospital which had a history of strong relationships between

medical and administrative staff, modified PLM to just a formalization of the relationship

instead of the large scale reorganization usually associated with PLM.

PLM in USA MEDDACs

Whether PLM is a good fit for USA MEDDACs is undetermined. There is a void

in the literature about the effectiveness of PLM in USA MEDDACs. While anecdotal

evidence supports the view that most of the problems identified in civilian hospital

attempting to use PLM would also apply to a USA MEDDAC, the USA MEDDAC may

also have unique problems with PLM because it is a military organization with a strict

rank structure. For example, Nackel & Kues (1986) state that a benefit of PLM is that the

new management structure creates a management philosophy that encourages a

productive creative tension between top management and the general managers. While

this is a sound point, its applicability to USA MEDDACs is questionable. The creative

tension created by PLM may not be applicable to an Army organization (USA

MEDDAC) that bases authority and responsibility not on ability but on rank and

seniority.

One potential advantage the USA MEDDAC has over the civilian industry is that

the military rank structure can be used to provide more control over the actions of the

physician. Fackelmann (1985) states that physicians can make PLM difficult because

they may have a hard time accepting the fact that they have to report to a general manager

who may or may not be a physician. The USA MEDDAC's advantage is weak because

the military rank structure does not always prevent overt physician resistance.

With the lack of studies proving the effectiveness of PLM in USA MEDDACs, a

possible explanation of why the senior management of a USA MEDDAC would make a

decision to implement PLM can be provided by one finding of the study conducted by

Bowers & Taylor (1990). In the study, Bowers & Taylor found most of the

administrators who decided to implement PLM did so not because they simply wanted to

"shake-up" the organization but because they were anticipating change and a more

competitive future. The administrators did not want to get caught unaware and saw PLM

as a method of improving management of their institutions and become more patient

focused. With the anticipated implementation of enrollment based capitation and hospital

"report cards" in the Military Health System (MHS), any hospital management technique

or reorganization plan, concept or structure prominent in the literature will probably be

considered.

Purpose

The purpose of this paper is to review the history and garner a thorough understanding of PLM and its implementation.   Then, to identify key characteristics of successful PLM implementation and survey the level of satisfaction of providers at Blanchfield Army Community Hospital.

Methods and Procedures

This descriptive study of qualitative data collected from the responses of in-house providers was obtained by a survey created and executed within the hospital. The survey consists of two parts. The first part is demographic data, which will help managers identify critical areas where problems need to be addressed and corrected. The second part consists of a body of questions broken in to seven separate areas of categorical information. The final survey was reviewed by the Deputy Commanders for Clinical Services, Administration, and Nursing and approved by the Commander for implementation. The survey is two pages long and consists of 35 questions under seven topical areas. All providers (i.e. physicians, nurse practitioners, CRNAs, Nurse Mid-wives, and physician assistants) were asked to complete all the questions regarding the impact of PLM on Blanchfield Army Community Hospital. During this initial survey, only providers were asked to respond since they interact with the customer and all other services provided by the hospital. The responses were then evaluated for content and statistical significance. The survey answers were measured on a five-point Likert Scale (see attached survey).

Part 1 - Demographics

In order to assess whether or not PLM is an adequate management system in USA MEDDACs, demographic data is used to as a means to differentiate problems with the concept of PLM versus internal management problems associated with any one particular service line or directorate. Confidentiality of the respondents was ensured by not requiring any specific information about the survey takers. The survey was given after a visit by the Joint Commission for the Accreditation of Healthcare Organizations (JCAHO) to attempt to control for any biased feelings of PLM due to the stress of an impending survey.

Part II - Categorical Information

Seven categories of questions were developed to address perceived reasons for implementing PLM as a internal management strategy over military medical treatment structures outlined in MEDCOM Reg 10-1. These categories were:

      1. Improve access of beneficiaries to care. Access is one of the cornerstones to healthcare delivery in the nineties.

      2. Address the administrative burden placed on providers during the delivery of care.

      3. Whether or not the "Environment of Care" focuses on customer service.

      4. Quality of care issues are addressed in the fourth category of questions.

      5. Personal preference of traditional organizational structures versus product line management.

      6. Satisfaction with the product line management philosophy.

      7. TRICARE's implementation on product line management.

<u>Reliability and Validity</u>

Reliability and validity was established by pre-testing the survey instrument .

Validity during the survey process will be established by using the same survey on those

being asked to render responses. Content validity of the survey is based on current

literature on product line management. Face validity is established by a review of the

survey instrument by seven BACH key management personnel.

<p align="center">**Results**</p>

The intent of this research is to provide the management staff of Blanchfield

Army Community Hospital a pool of data broken out by category to facilitate any future

decisions regarding the direction of this organization. Since there are already tools in

place to monitor the satisfaction of patients, it is paramount that healthcare facilities

identify internal problems and praises that exist within an organization.

The first four questions provided demographic information about each of the providers that responded to the survey. As illustrated in Figure 1, 37 percent of those

Figure 1: Service Line of Respondents
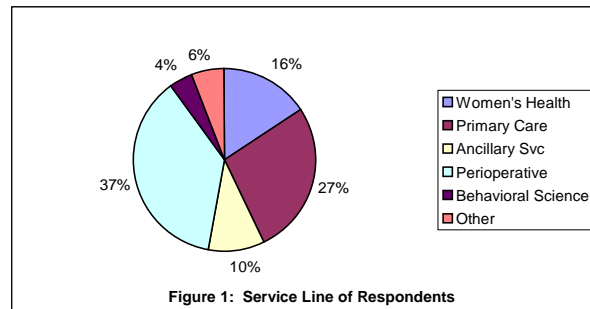
responding were from Perioperative Services; 27 percent were from Primary Care;

Women's Health and Ancillary services comprised 16 and 10 percent respectively; 6

percent of Other providers in the facilty were represented; and 4 percent of responses

came from Behavioral Science.

The second question addressed whether or not the providers that responded were at Blanchfield prior to the implementation of Service Line

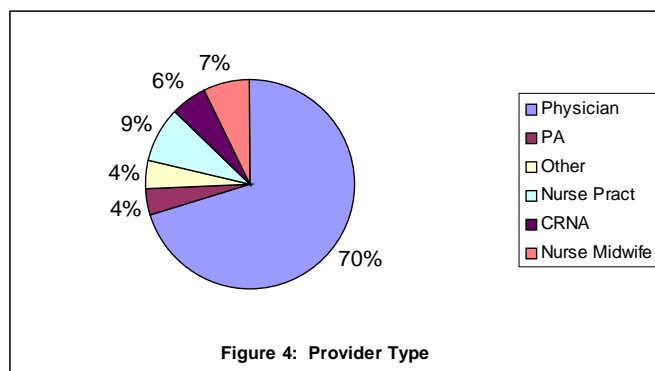Figure 2: Providers Present at BACH Prior to SLM Implementation
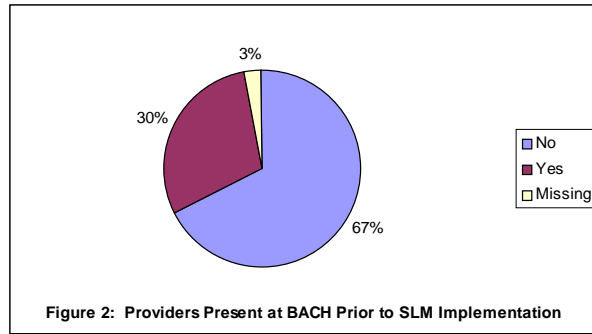
Management. As depicted by Figure 2, an overwhelming 67 percent were not present prior to the SLM implementation. Thirty percent, however, were present prior to its full implementation, and only three percent failed to respond.

Providers identified the number of years that they have been working at BACH in the third question of the demographics. Only 10 percent of the providers have remained at their current

Figure 3: Years at BACH
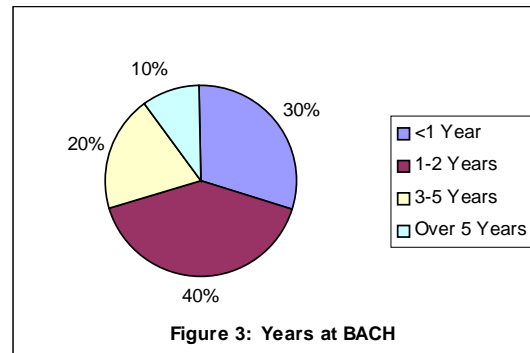
duty station for over five years. Twenty percent were here between three and five years. The largest time period on station was one to two years with 40 percent, and those providers with less than one year was equal to 30 percent of the surveyed population.

The final demographic question dealt with the provider type responding to the survey. Seventy percent of respondents were physicians. Nine percent of nurse practitioners responded to the survey. Nurse midwives and certified nurse anesthetists made up seven and six

Figure 4: Provider Type

percent of respondents respectively, and both physician assistants and other providers were equally represented with four percent of the surveyed population.

Access to care was the first category of questions posed to providers. Thirty percent of the providers felt that access to care has improved with the introduction of service line management. Neither response regarding access to care were found to be statistically significant at greater than the .05 level. However, 30 percent of respondents felt that SLM has enhanced access to care (Figure 5).

	Response +/-	Negative	Central	Positive	Significance
Enhanced by SLM	**+**	17%	53%	**30%**	0.085
Increased for beneficiaries previous	-	10%	60%	23%	0.117

Figure 5 Improve Access of Beneficiaries to Care

One of the key elements to the successful implementation of SLM is to reduce the administrative burden on providers. Of the six questions asked, only one had a statistical significance of .0001. Forty four percent of providers felt that the number of levels of responsibility has been greatly reduced.

	Response +/-	Negative	Central	Positive	Significance
Span of Control (<8)	**+**	4%	49%	**44%**	0.0001
Info/Admin Systems Support	+	23%	41%	34%	0.911
Supports Administrative Needs	+	23%	46%	32%	1
Have Skills to Manage	+	20%	47%	33%	0.116
Creates Obstacles	-	30%	37%	33%	0.506
Enhances Communication	+	27%	47%	26%	0.795

Figure 6 Reduce Admin Burden on Health Care Providers

Customer service is another important factor to organizational efficiency. All eight questions answered by providers were significant at greater than the .02 level. Fifty-

six percent felt they controlled the entire clinical delivery of care. Forty-six percent felt

they worked well with administrative offices. Thirty-seven percent felt that the SLM

transition was implemented to increase customer service. Forty-nine percent stated that

metrics were available to support their managerial needs, and fifty-three percent felt they

could make informed decisions within the SLM concept. Sixty percent said that the

structure enhances job performance. Eighty two percent stated that they were aware of

their chain of command, and forty-four percent stated they were not seeing too many

patients as a result of SLM.

	Response +/-	Negative	Central	Positive	Significance
Clinical Delivery of Care	+	16%	29%	**56%**	0.0005
Work Well with RM/Personnel	+	10%	44%	**46%**	0.0005
Transitioned to Increase Cust/Svc	+	10%	53%	**37%**	0.02
Metrics Available to Measure	+	13%	39%	**49%**	0.0005
Informed of Decisions within SLM	+	19%	29%	**53%**	0.003
Structure Enhances Job Perform	+	22%	17%	**60%**	0.001
Aware of Chain of Command	+	7%	11%	**82%**	0.0005
See too Many Patients with SLM	-	**44%**	49%	7%	0.0005

Figure 7 Work Environment that Focuses on Customer Service

Quality of care remained unchanged. In each of the questions none were found to

be statistically significant, and the percentage of positive to negative responses appear

similar with regard to total numbers.

	Response +/-	Negative	Central	Positive	Significance
More Productive with SLM	+	26%	51%	23%	0.297
SLM Enhances Qual of Care	+	26%	46%	29%	0.699
Quality Care Easier to Deliver	+	24%	53%	21%	0.791

Figure 8 Increase Quality of Care Provided to Beneficiary

In comparing the previous organizational design to the current, there were no

statistically significant responses to command relationships, decision making, or design

efficiency of either managerial style. However, a statistically significant 36% felt that

modifications or improvements must be made to the current organizational structure.

	Response +/-	Negative	Central	Positive	Significance
Command Works as Team	+	26%	43%	31%	0.435
Decision Making Better with SLM	+	20%	63%	17%	0.726
Prefer SLM over Other Designs	+	31%	46%	23%	0.194
BACH Should Change to Other	-	19%	59%	23%	0.389
Modify/Improve Current Struct	**-**	**11%**	**53%**	**36%**	**0.026**

Figure 9 Comparison of Organizational Structures in Healthcare

Overall satisfaction with SLM showed a statistically significant response to two questions in particular. Forty-three percent of those surveyed said they were allowed to think "outside the box" in order to better their work environment. Fifty-four percent said they felt responsible for the success of SLM.

	Response +/-	Negative	Central	Positive	Significance
Think Outside the Box	+	20%	37%	**43%**	0.031
Understand Concepts of SLM	+	31%	20%	49%	0.267
Received Brief on SLM	**+**	**44%**	**30%**	**26%**	**0.025**
Previous Structure Inefficient	+	16%	74%	10%	0.349
SLM Transition Successful	**+**	10%	64%	**26%**	0.086
Participate in Leadership Decision	+	23%	50%	27%	1
More Effective in Primary Mission	+	19%	51%	30%	0.139
SLM Increased Efficiency	+	24%	61%	14%	0.101
Satisfied with SLM Structure	+	29%	40%	31%	0.551
Empowered to affect Change	+	21%	39%	40%	0.161
Responsible for Success in SLM	**+**	11%	34%	**54%**	0.0005
Sense of Ownership within Service	+	23%	44%	33%	0.553
Mission uneffected by SLM	+	19%	60%	21%	0.871

Figure 10 Overall Satisfaction with Service Line Management

Finally, thirty-seven percent felt that SLM was needed to actually implement the cumbersome elements of TRICARE. Fifty six percent of the respondents stated that the leadership of the hospital supports the TRICARE effort, and 20 percent responded that SLM was not been positively influenced by the introduction of TRICARE. Ironically, a

question that had nothing to do with the SLM management style shows that 56 percent of

providers feel that TRICARE is not meeting the needs of our beneficiary population.

	Response +/-	Negative	Central	Positive	Significance
TRICARE Positive with SLM	+	20%	64%	16%	0.45
TRICARE Meets Needs of Bene's	**+**	**56%**	**36%**	**9%**	**0.0005**
Leadership Supports TRICARE	+	4%	40%	**56%**	0.0005
TRICARE Required Intro of SLM	+	14%	49%	**37%**	0.008

Figure 11 Effect on TRICARE

These findings will serve as an organizational compass to guide and direct

strategic improvements. The hope for this information is to show that a complete

overhaul is not necessary to improve the overall effectiveness of the organization; rather,

that a focused approach to critical areas will eventually lead to a more efficient, customer

oriented operation.

Discussion

The purpose of this research process was to identify provider level satisfaction

with Service Line Management implementation based on critical characteristics

introduced in the literature. Blanchfield should use these findings to identify problem

areas that may need closer attention. The following discussion will focus on responses by

providers that were statistically significant and, of course, realistically addressable.

Based on the results furnished in the previous paragraph, a larger percentage of

respondents felt that access to care has been enhanced by the introduction of SLM as

opposed to the previous organizational design. This result is based on the historical

knowledge of the providers and their perception as to the increase in access for beneficiaries.

Providers must have a reduction in the administrative burden associated with providing care to influence the quality and access of care provided to customers. Only one response provided by providers was found to be statistically significant. Providers felt that their "span of control" or levels of responsibility had been greatly reduced. The distribution of answers with regard to information and administration systems, administrative support, skills possessed to manage SLM, minimized obstacles, and enhanced communication seem normally distributed across the survey responses. This reduction in the administrative burden of providers must ultimately impact the focus on customer service.

Each of the responses to creating a work environment that focuses on customer service was found to be statistically significant. A greater portion of respondents felt that they controlled the entire clinical delivery of care, they worked well with administrative personnel in support of their service line, and the transition to SLM took place to increase patient care. Likewise, providers felt that adequate metrics are available to measure productivity, they are informed of decisions within the SLM structure, SLM enhances job performance, and the chain of command is accessible. Ironically, this increase in customer service has not appeared to greatly increase the number of patients seen by the providers. A large percentage of providers felt that SLM has not forced them to see too many patients. With a perceived increase in customer service and access to care, quality of care must naturally follow along the same course.

However, that assumption must not be made with regard to quality. This set of questions focused on the perceived quality of care for beneficiaries under SLM and under a traditional military structure. No significant responses were identified, however the underlying theme to the responses seems to be that quality of care is consistent regardless of the management philosophy. So, if quality of care seems unhindered by management philosophy, then what other characteristics of the two structures can be compared to evaluate their effectiveness.

Again, only one question had responses that were statistically significant regarding the comparison or organizational structures. More providers felt that SLM should make modifications or improvements to its structure, but that statement could be relevant to any organization using any organizational management idea. More respondents than not felt that the command works as a team but also felt that BACH should change back or to another structure, which may influence the providers overall satisfaction with SLM.

In the evaluation of overall satisfaction, three responses were found to be statistically significant. Respondents felt that they were allowed to think outside the box and they were responsible for the overall success of SLMs implementation. However, a majority of respondents stated that they had never received a briefing on SLM.

Finally, four questions were posed to evaluate the effect of SLM on the implementation of TRICARE. Each of the questions were statistically significant, and half of the four responses had expected results. A majority felt that the leadership supports the TRICARE efforts and a little over a third stated that SLM implementation was required for the start of TRICARE. These responses show that the providers feel that

the organization is attempting to make TRICARE work and that the implementation of

SLM was needed to meet the demands of a complex change to military healthcare like

TRICARE. Again, a majority feel that the needs of beneficiaries are not being met by

TRICARE, and that more providers feel that SLM has not contributed positively to that

program.

Conclusion and Recommendations

This research process has identified provider level satisfaction with Service Line

Management within Blanchfield Army Community Hospital. Based on this descriptive

study of qualitative data collected from the responses of in-house providers, three major

recommendations are made to improve the perceptions and effectiveness of an SLM

implementation. First, continue to educate the staff on SLM concepts and structures. An

underlying theme throughout the responses shows a relative ignorance of how the hospital

operates as a whole. Incorporate an SLM briefing during the bi-monthly hospital

orientation given to all staff. With the introduction of a new process or methodology,

resistance to change is the first hurdle to overcome. Service Line Management offers a

different approach to mission accomplishment. Therefore, the staff must constantly be

informed on the continuous quality improvement efforts exercised to improve this new

philosophy. Finally, show how the efforts of SLM through TRICARE are meeting the

needs of our beneficiary population. The effectiveness of an organizations ability to meet

the demands of its customer must be broadcasted by the very workers that attempt to

bring this service to the patient.

Since it has taken 10-20 years for the implementation of PLM to become

widespread in manufacturing, it can be expected that PLM in health care will take as long

to fully mature (Manning, 1987). Overcoming the problems associated with defining product lines in health care will occur with time. The logic of having a product line manager coordinating disparate inputs and ensuring the consistent and quality delivery of products appears to fit in healthcare. PLM was found to enhance patient care by integrating health care services and formalizing the advocacy of the patient (Manning, 1987). PLM can be successful because it allows hospitals to respond to changes faster by pushing decision making further down the hierarchical chain and encouraging participative decision making (Bowers & Taylor, 1990).

Predicting whether PLM will be successful in USA MEDDACs is difficult to determine without a more representative study. Although USA MEDDACs are similar to non-profit, utilization maximizing hospitals, there still may be enough of a difference to limit comparisons or inferences. Therefore, the success or failure of implementing PLM in USA MEDDACs will be largely dependent on the ability of corporate/executive decision makers to evaluate its strengths and weaknesses based on customer and employee feedback.

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Appendix A -- **Service Line Management (SLM) Survey**

Page 1 of 2

Product Line: [ ] Women's Health   [ ] Primary Care
                     [ ] Pharm/Lab/X-Ray   [ ] Administrative Staff
                     [ ] Perioperative   [ ] Behavioral Science
                                   [ ] Other

Were you at BACH prior to SLM Implementation? [ ] Yes   [ ] No

Years assigned to BACH: Less than 1 Year [ ]   1 to 2 Years [ ]
                                         3-5 Years [ ]   Over 5 Years [ ]

Type of Provider:
      [ ] Physician   [ ] Nurse   [ ] Phys Asst   [ ] Other
      [ ] Nurse Pract   [ ] CRNA   [ ] Nurse Midwife

1= Strongly Agree   2= Agree   3= Neutral   4= Disagree   5= Strongly Disagree

Improve Access of Beneficiaries to Care

	1	2	3	4	5
1. Access to Care is enhanced by our current team/group concept.	[ ]	[ ]	[ ]	[ ]	[ ]
2. Access to Care for beneficiaries was better under previous design.	[ ]	[ ]	[ ]	[ ]	[ ]

Reduce Administrative Burden on Health Care Providers

	1	2	3	4	5
1. My span of control is less than eight(8) levels in depth	[ ]	[ ]	[ ]	[ ]	[ ]
2. I feel current information/admin systems support decentralization.	[ ]	[ ]	[ ]	[ ]	[ ]
3. SLM supports my administrative needs.	[ ]	[ ]	[ ]	[ ]	[ ]
4. I have the required skills to be an effective SLM administrator.	[ ]	[ ]	[ ]	[ ]	[ ]
5. SLM creates unnecessary obstacles to efficient/effective healthcare.	[ ]	[ ]	[ ]	[ ]	[ ]
6. SLM enhances communication between/among service lines.	[ ]	[ ]	[ ]	[ ]	[ ]

Create a Work Environment that Focuses on Customer Service

	1	2	3	4	5
1. My service line is based on the entire clinical delivery of care.	[ ]	[ ]	[ ]	[ ]	[ ]
2. I have a good working relationship with Res Mgt & Personnel.	[ ]	[ ]	[ ]	[ ]	[ ]
3. BACH transitioned to SLM to increase customer service.	[ ]	[ ]	[ ]	[ ]	[ ]
4. I have useful methods to measure my product line's productivity.	[ ]	[ ]	[ ]	[ ]	[ ]
5. I am made aware of decisions affecting me in a timely manner.	[ ]	[ ]	[ ]	[ ]	[ ]
6. The structure of BACH enables me to adequately perform my job.	[ ]	[ ]	[ ]	[ ]	[ ]
7. I know my chain of command & where to address issues as they arise.	[ ]	[ ]	[ ]	[ ]	[ ]
8. SLM has forced me to see too many patients.	[ ]	[ ]	[ ]	[ ]	[ ]

Please Continue Survey on Back Page

1= Strongly Agree   2= Agree   3= Neutral   4= Disagree   5= Strongly Disagree

Increase Quality of Care Provided to Beneficiaries   **1   2   3   4   5**

1. My service line is more productive and efficient because of SLM.   [ ] [ ] [ ] [ ] [ ]
2. The SLM organizational structure enhances the quality of care.   [ ] [ ] [ ] [ ] [ ]
3. Quality patient care is easier to deliver under BACH's SLM structure. [ ] [ ] [ ] [ ] [ ]

Comparison of Organizational Structures in Healthcare

1. SLM ensures that this command works together as a team.   [ ] [ ] [ ] [ ] [ ]
2. Decision making with SLM vs previous structure is better than before. [ ] [ ] [ ] [ ] [ ]
3. I like the BACH SLM structure over other organizational structures.   [ ] [ ] [ ] [ ] [ ]
4. BACH should change to a traditional organizational structure.   [ ] [ ] [ ] [ ] [ ]
5. BACH should modify and improve current SLM structure.   [ ] [ ] [ ] [ ] [ ]

Overall satisfaction with Product Line Management

1. I'm allowed to think "outside the box" to improve my service line.   [ ] [ ] [ ] [ ] [ ]
2. I understand the concepts of SLM.   [ ] [ ] [ ] [ ] [ ]
3. I received a briefing on SLM during required educational classes.   [ ] [ ] [ ] [ ] [ ]
4. The previous BACH organizational structure was inefficient.   [ ] [ ] [ ] [ ] [ ]
5. BACH has successfully and efficiently transitioned to SLM.   [ ] [ ] [ ] [ ] [ ]
6. I am better able to participate in leadership decisions.   [ ] [ ] [ ] [ ] [ ]
7. I am more effective in my primary mission.   [ ] [ ] [ ] [ ] [ ]
8. SLM has increased my overall efficiency.   [ ] [ ] [ ] [ ] [ ]
9. I am satisfied with the current SLM structure.   [ ] [ ] [ ] [ ] [ ]
10. I feel empowered to affect change within my workspace.   [ ] [ ] [ ] [ ] [ ]
11. I feel responsible for the success of my service line.   [ ] [ ] [ ] [ ] [ ]
12. SLM has created a sense of ownership within my service line.   [ ] [ ] [ ] [ ] [ ]
13. SLM has resulted in no change to BACH's healthcare mission.   [ ] [ ] [ ] [ ] [ ]

Effect on Tri-Care

1. SLM has positive contributions to the implementation of TRICARE.   [ ] [ ] [ ] [ ] [ ]
2. TRICARE meets the needs of our beneficiary population.   [ ] [ ] [ ] [ ] [ ]
3. My leadership supports the efforts of TRICARE.   [ ] [ ] [ ] [ ] [ ]
4. **The change to TRICARE required the structure of BACH to reorganize.**[ ] [ ] [ ] [ ] [ ]